 <p align="center"> United States Environmental Protection Agency Washington, DC 20460 Interagency Agreement/ Amendment Part 1 - General Information </p>		1. EPA IA Identification Number DW-75-95837801 - 1		2. Funding Location by Region EPA R5					
		3. Other Agency IA ID Number (if known)		4. Awarding Office IASSC West					
		5. Type of Action Augmentation: Increase		6. IA Specialist: Yvette Downs 206-553-6321 Downs.Yvette@epa.gov					
7. Name and Address of EPA Organization US Environmental Protection Agency IASSC West 1200 Sixth Avenue, Suite 900, OMP-145 Seattle, WA 98101			8. Name and Address of Other Agency Department of Health & Human Services BPH / 536 South Clark Street Chicago, IL 60605						
9. DUNS: 029128894		10. BETC: DISB		11. DUNS: 134153287					
12. BETC: COLL									
13. Project Title and Description Analysis, Interpretation and Data Management of Great Lakes Water for Inorganic Chemicals This project supports the Great Lakes Restoration Initiative (GLRI) and the Great Lakes Water Quality Agreement under the Public Law 112-74. This agreement provides funding to Federal Occupational Health (FOH) contractors to help implement the priorities of the GLRI. FOH contractors will provide analytical support for nutrient analysis for portions of the Nearshore and AEMECP focus areas. As part of the Nearshore program, the phosphorus data from Lake Erie will augment existing long-term monitoring, and provide information to aid in assessing and managing phosphorus in that Lake. Additionally, FOH will work with GLNPO long-term, offshore monitoring efforts. This amendment adds \$436,448 of EPA funding and extends project/budget period to 10/24/2015.									
14. EPA Project Officer (Name, Address, Telephone Number) Glenn Warren 77 West Jackson Blvd. (G-17J) Chicago, IL 60604-3507 312-886-2405 E-Mail: warren.glenn@epa.gov FAX: 312-692-2131			15. Other Agency Project Officer (Name, Address, Telephone) Michelle Stemmons BPH / 536 South Clark Street Chicago, IL 60605 312-886-0413 E-Mail: michelle.stemmons@foh.hhs.gov FAX: 312-886-0434						
16. Project Period: 10/25/2012 to 10/24/2015			17. Budget Period: 10/25/2012 to 10/24/2015						
18. Scope of Work (See Attachment) Scope of Work is Attached.									
19. Employer/Tax ID No. 520852695		20. CAGE No: 347A4		21. ALC: 68-01-0727					
22. Statutory Authority for Transfer of Funds and Interagency Agreement Consolidated Appropriations Act, 2012; Public Law 112-74					23. Other Agency Type Federal Agency				
24. Revise Reimbursable Funds and Direct Fund Cites (only complete if applicable)									
	Previous Funding	This Action	Amended Total						
Revise Reimbursable (in-house)			0						
Direct Fund Cite (contractor)			0						
Total			0						
Funds	Previous Amount	Amount This Action	Total Amount						
25. EPA Amount	\$491,123	\$436,448	\$927,571						
26. EPA In-Kind Amount			\$0						
27. Other Agency Amount			\$0						
28. Other Agency In-Kind Amount			\$0						
29. Total Project Cost	\$491,123	\$436,448	\$927,571						
30. Fiscal Information									
Treas. Symbol	DCN	FY	Appropriation	Budget Org	PRC	Object Class	Site/Project	Cost Org	Ob/De-Ob Amt
683/40108	1305HBX022	1314	B	05HT0	202BJ7XF5	2506			436,448
									436,448

Part II - Approved Budget				EPA IAG Identification Number
				DW-75-95837801 - 1
31. Budget Categories	Itemization of All Previous Actions	Itemization of This Action	In-Kind Itemization of This Action	Itemization of Total Project Cost to Date
(a) Personnel	\$0	\$24,150		\$24,150
(b) Fringe Benefits	\$0			\$0
(c) Travel	\$0	\$4,400		\$4,400
(d) Equipment	\$0			\$0
(e) Supplies	\$0	\$2,680		\$2,680
(f) Procurement / Assistance	\$491,123	\$364,838		\$855,961
(g) Construction	\$0			\$0
(h) Other	\$0	\$40,380		\$40,380
(i) Total Direct Charges	\$491,123	\$436,448	\$0	\$927,571
(j) Indirect Costs:	\$0			\$0
Charged - Amount Rate: % Base: \$ Not Charged: Funds-Out: Not charged by Other Agency Estimate by other Agency Amount \$				
(k) Total (EPA Share 100.00 %) (Other Agency Share 0.00 %)	\$491,123	\$436,448	\$0	\$927,571
32. How was the IDC Base calculated?				
33. Is equipment authorized to be furnished by EPA or leased, purchased, or rented with EPA funds? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Identify all equipment costing \$1,000 or more)				
34. Are any of these funds being used on extramural agreements? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Type of Extramural Agreement Contract				
Contractor/Recipient Name (if known)	Total Extramural Amount Under This Project		Percent Funded by EPA (if known)	
TBD	855961 Total \$ 855,961.00		100	
Part III - Funding Methods and Billing Instructions				
(Note: EPA Agency Location Code (ALC) - 68010727)				
<input checked="" type="checkbox"/> Disbursement Agreement	Request for repayment of actual costs must be itemized on SF 1080 and submitted to the Financial Management Office, Cincinnati, OH 45268-7002:			
<input checked="" type="checkbox"/> Repayment	<input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Quarterly <input type="checkbox"/> Upon Completion of Work			
<input type="checkbox"/> Advance	Only available for use by Federal agencies on working capital fund or with appropriate justification of need for this type of payment method. Unexpended funds at completion of work will be returned to EPA. Quarterly cost reports will be forwarded to the Financial Management Center, EPA, Cincinnati, OH 45268-7002.			
<input type="checkbox"/> Allocation Transfer-Out	Used to transfer obligational authority or transfer of function between Federal agencies. Must receive prior approval by the Office of Comptroller, Budget Division, Budget Formulation and Control Branch, EPA Hdqtrs. Forward appropriate reports to the Financial Reports and Analysis Branch, Financial Management Division, PM-226F, EPA, Washington, DC 20460.			
36. <input type="checkbox"/> Reimbursement Agreement <input type="checkbox"/> Repayment <input type="checkbox"/> Advance				
<input type="checkbox"/> Allocation Transfer-In				
Other Agency's Billing Address (include ALC or Station Symbol Number)			Other Agency's Billing Instructions and Frequency	

Part IV - Acceptance Conditions

EPA Identification Number

DW-75-95837801 - 1

37. Terms and Conditions, when included, are located at the end of the 1610-1, or as an attachment.

Part V - Offer and Acceptance

Note: A) For Fund-out actions, the agreement/amendment must be signed by the other agency official in duplicate and one original returned to the Grants and IA Management Division for Headquarters agreements or to the appropriate EPA Regional IA administration office within 3 calendar weeks after receipt or within any extension of time that may be granted by EPA. The agreement/amendment must be forwarded to the address cited in item 29 after acceptance signature.

Failure to return the properly executed document within the prescribed time may result in the withdrawal of offer by EPA. Any change to the agreement/amendment by the other agency after the document is signed by the EPA Award Official, which the Award Official determines to materially alter the agreement/amendment, shall void the agreement/amendment.

B) For Funds-In actions, the other agency will initiate the action and forward two original agreements/amendments to the appropriate EPA program office for signature. The agreements/amendments will then be forwarded to the appropriate EPA IA administration office for signature on behalf of the EPA. EPA will return one original copy after acceptance returned to the other agency after acceptance.

EPA IA Administration Office (for administrative assistance)**EPA Program Office (for technical assistance)****38. Organization/Address****39. Organization/Address**

U.S. Environmental Protection Agency
IASSC West
1200 Sixth Avenue, Suite 900, OMP-145
Seattle, WA 98101

US Environmental Protection Agency
R5 - Region 5
77 West Jackson Blvd.
Chicago, IL 60604-3507

Award Official on Behalf of the Environment Protection Agency

40. Digital signature applied by EPA Award Official | Armina K. Nolan - Manager - Grants and Interagency Agreements Unit

Date

08/26/2013

Authorizing Official on Behalf of the Other Agency


41. Signature

Typed Name and Title

Date

Robert Gibbs, Program Manager

08/27/2013

 <p>United States Environmental Protection Agency Washington, DC 20460</p> <p>Interagency Agreement/ Amendment</p> <p>Part 1 - General Information</p>		1. EPA IA Identification Number DW-75-95837801 - 0		2. Funding Location by Region EPA R5					
		3. Other Agency IA ID Number (if known)		4. Awarding Office IASSC West					
		5. Type of Action New		6. IA Specialist: Yvette Downs 206-553-6321 Downs.Yvette@epa.gov					
7. Name and Address of EPA Organization US Environmental Protection Agency IASSC West 1200 Sixth Avenue, Suite 900, OMP-145 Seattle, WA 98101			8. Name and Address of Other Agency Department of Health & Human Services BPH / 536 South Clark Street Chicago, IL 60605						
9. DUNS: 029128894		10. BETC: DISB		11. DUNS: 134153287					
12. BETC: COLL									
13. Project Title and Description Analysis, Interpretation and Data Management of Great Lakes Water for Inorganic Chemicals This project supports the Great Lakes Restoration Initiative (GLRI) and the Great Lakes Water Quality Agreement under the Public Law 112-74. This agreement provides funding to Federal Occupational Health (FOH) contractors to help implement the priorities of the GLRI. FOH contractors will provide analytical support for nutrient analysis for portions of the Nearshore and AEMECP focus areas. As part of the Nearshore program, the phosphorus data from Lake Erie will augment existing long-term monitoring, and provide information to aid in assessing and managing phosphorus in that Lake. Additionally, FOH will work with GLNPO long-term, offshore monitoring efforts.									
14. EPA Project Officer (Name, Address, Telephone Number) Glenn Warren 77 West Jackson Blvd. (G-17J) Chicago, IL 60604-3507 312-886-2405 E-Mail: warren.glenn@epa.gov FAX: 312-692-2131			15. Other Agency Project Officer (Name, Address, Telephone) Michelle Stemmons BPH / 536 South Clark Street Chicago, IL 60605 312-886-0413 E-Mail: michelle.stemmons@foh.hhs.gov FAX: 312-886-0434						
16. Project Period: 10/25/2012 to 10/24/2013			17. Budget Period: 10/25/2012 to 10/24/2013						
18. Scope of Work (See Attachment) Scope of Work is Attached.									
19. Employer/Tax ID No. 520852695		20. CAGE No: 347A4		21. ALC: 68-01-0727					
22. Statutory Authority for Transfer of Funds and Interagency Agreement Consolidated Appropriations Act, 2012; Public Law 112-74					23. Other Agency Type Federal Agency				
24. Revise Reimbursable Funds and Direct Fund Cites (only complete if applicable)									
	Previous Funding	This Action	Amended Total						
Revise Reimbursable (in-house)		0	0						
Direct Fund Cite (contractor)		0	0						
Total			0						
Funds	Previous Amount	Amount This Action	Total Amount						
25. EPA Amount		\$491,123	\$491,123						
26. EPA In-Kind Amount			\$0						
27. Other Agency Amount			\$0						
28. Other Agency In-Kind Amount			\$0						
29. Total Project Cost		\$491,123	\$491,123						
30. Fiscal Information									
Treas. Symbol	DCN	FY	Appropriation	Budget Org	PRC	Object Class	Site/Project	Cost Org	Ob/De-Ob Amt
682/30108	1205HBX018	1213	B	05HT0	202BJ7XF5	2506			491,123
									491,123

Part II - Approved Budget				EPA IAG Identification Number
				DW-75-95837801 - 0
31. Budget Categories	Itemization of All Previous Actions	Itemization of This Action	In-Kind Itemization of This Action	Itemization of Total Project Cost to Date
(a) Personnel		\$0		\$0
(b) Fringe Benefits				\$0
(c) Travel		\$0		\$0
(d) Equipment				\$0
(e) Supplies				\$0
(f) Procurement / Assistance		\$491,123		\$491,123
(g) Construction				\$0
(h) Other				\$0
(i) Total Direct Charges	\$0	\$491,123	\$0	\$491,123
(j) Indirect Costs:	\$0			\$0
Charged - Amount Rate: % Base: \$ Not Charged: Funds-Out: Not charged by Other Agency Estimate by other Agency Amount \$				
(k) Total (EPA Share 100.00 %) (Other Agency Share 0.00 %)	\$0	\$491,123	\$0	\$491,123
32. How was the IDC Base calculated?				
33. Is equipment authorized to be furnished by EPA or leased, purchased, or rented with EPA funds? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Identify all equipment costing \$1,000 or more)				
34. Are any of these funds being used on extramural agreements? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Type of Extramural Agreement Contract				
Contractor/Recipient Name (if known)	Total Extramural Amount Under This Project		Percent Funded by EPA (if known)	
TBD	491123 Total \$ 491,123.00		100	
Part III - Funding Methods and Billing Instructions				
35.	(Note: EPA Agency Location Code (ALC) - 68010727)			
<input checked="" type="checkbox"/> Disbursement Agreement	Request for repayment of actual costs must be itemized on SF 1080 and submitted to the Financial Management Office, Cincinnati, OH 45268-7002.			
<input checked="" type="checkbox"/> Repayment	<input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Quarterly <input type="checkbox"/> Upon Completion of Work			
<input type="checkbox"/> Advance	Only available for use by Federal agencies on working capital fund or with appropriate justification of need for this type of payment method. Unexpended funds at completion of work will be returned to EPA. Quarterly cost reports will be forwarded to the Financial Management Center, EPA, Cincinnati, OH 45268-7002.			
<input type="checkbox"/> Allocation Transfer-Out	Used to transfer obligational authority or transfer of function between Federal agencies. Must receive prior approval by the Office of Comptroller, Budget Division, Budget Formulation and Control Branch, EPA Hdgtrs. Forward appropriate reports to the Financial Reports and Analysis Branch, Financial Management Division, PM-226F, EPA, Washington, DC 20460.			
36. <input type="checkbox"/> Reimbursement Agreement	<input type="checkbox"/> Repayment <input type="checkbox"/> Advance			
<input type="checkbox"/> Allocation Transfer-In				
Other Agency's Billing Address (include ALC or Station Symbol Number)			Other Agency's Billing Instructions and Frequency	

Part IV - Acceptance Conditions

EPA Identification Number

DW-75-95837801 - 0

37. Terms and Conditions, when included, are located at the end of the 1610-1, or as an attachment.

Part V - Offer and Acceptance

Note: A) For Fund-out actions, the agreement/amendment must be signed by the other agency official in duplicate and one original returned to the Grants and IA Management Division for Headquarters agreements or to the appropriate EPA Regional IA administration office within 3 calendar weeks after receipt or within any extension of time that may be granted by EPA. The agreement/amendment must be forwarded to the address cited in item 29 after acceptance signature.

Failure to return the properly executed document within the prescribed time may result in the withdrawal of offer by EPA. Any change to the agreement/amendment by the other agency after the document is signed by the EPA Award Official, which the Award Official determines to materially alter the agreement/amendment, shall void the agreement/amendment.

B) For Funds-In actions, the other agency will initiate the action and forward two original agreements/amendments to the appropriate EPA program office for signature. The agreements/amendments will then be forwarded to the appropriate EPA IA administration office for signature on behalf of the EPA. EPA will return one original copy after acceptance returned to the other agency after acceptance.

EPA IA Administration Office (for administrative assistance)

EPA Program Office (for technical assistance)

38. Organization/Address**39. Organization/Address**

U.S. Environmental Protection Agency
IASSC West
1200 Sixth Avenue, Suite 900, OMP-145
Seattle, WA 98101

US Environmental Protection Agency
R5 - Region 5
77 West Jackson Blvd.
Chicago, IL 60604-3507

Award Official on Behalf of the Environment Protection Agency

40. Digital signature applied by EPA Award Official | Armina K. Nolan - Manager - Grants and Interagency Agreements Unit

Date

10/25/2012

Authorizing Official on Behalf of the Other Agency**41. Signature**

Typed Name and Title

Date

Robert Gibbs, Program Manager

11/20/2012

Scope of work for Interagency Agreement with Federal Occupational Health:

The main tasks for this agreement are as follows:

Chemical analysis:

As part of two regular surveys carried out annually (spring and summer) on all of the Laurentian Great Lakes, chemical analyses will be performed on water samples from several depths per station. There are approximately 73 stations throughout the Great Lakes. During the spring survey there are 432 samples generated. During the summer survey there are 576 samples generated. Chemical analyses, with the exception of dissolved reactive phosphorus are performed on preserved samples shipped to a land-based laboratory. In addition to field samples, quality assurance samples add approximately 10% to the total. Chemical analyses to be performed are:

Total phosphorus (MDL \leq 1 microgram/liter)

Total dissolved phosphorus (MDL \leq 1 microgram/liter)

Nitrite & nitrate (MDL \leq 0.03 milligram/liter)

Dissolved reactive silica (MDL \leq 0.01 milligram/liter)

Chloride (MDL \leq 0.13 milligram/liter)

Dissolved reactive phosphorus conducted aboard the R/V Lake Guardian (Lakes Michigan and Erie). (MDL \leq 0.5 microgram/liter)

At each station during the spring and summer surveys, a limited number of water samples (non-filtered) will be analyzed for major ions. There will be approximately 241 samples generated for these analyses in spring, and during the summer there will be approximately 161 samples generated: these estimates include the quality assurance samples associated with the analyses. The major ions to be analyzed are:

Calcium (MDL \leq 1.0 milligram/liter)

Magnesium (MDL \leq 1.0 milligram/liter)

Sodium (MDL \leq 1.0 milligram/liter)

Potassium (MDL \leq 1.0 milligram/liter)

In addition, at the 14 master stations (2-3 per lake), large volume samples are filtered and the filters analyzed for particulate organic carbon (MDL \leq 5 microgram/liter), total particulate nitrogen (MDL \leq 0.03 milligram/liter), total particulate phosphorus (MDL \leq 1 microgram/liter) and total suspended solids.

Chemical preparation for surveys:

A number of standards and reagents used for other operations during surveys are to be prepared. These include, but are not limited to:

Formazin turbidity standards

High and low check standards for pH, specific conductance, total alkalinity and turbidity.

Participation in spring and summer surveys:

In addition to the on-board analysis of dissolved reactive phosphorus in Lakes Michigan and Erie, a chemist will accompany the R/V Lake Guardian on its spring and summer surveys. These surveys each last approximately 30 – 40 days. During this time, the chemist is responsible for bottle labeling and water sample management for samples that will be transported to the land-based laboratory for analysis. The chemist works a 12-hour shift, usually in the 6:00 am to 6:00 pm time slot.

A second environmental scientist will also work aboard the ship during the surveys, participating in sampling, maintaining scientific instrumentation, performing data entry and quality assurance tasks, assisting in operation and maintenance of chemical and biological sensors used during the monitoring surveys. The environmental scientist works a 12-hour shift, usually in the 12:00 am to 12:00 pm time slot.

Cooperative Science and Monitoring Initiative

The U.S. EPA, Great Lakes National Program Office and Environment Canada are participating in a science initiative to provide data to environmental managers. One of the Great Lakes is focused on, per year, and additional ship-based work is performed on that lake. One of the main questions on all the lakes deals with the nutrient levels in the open waters and nearshore waters. We anticipate monthly surveys, from May through September, on the lake of interest. During these surveys, chemical analyses will be performed on water samples from several depths per station. The number of station varies from lake-to-lake, but we expect approximately 75 samples per month will be generated through this initiative (a total of approximately 375 samples). The chemical analyses to be performed will be the regular nutrients analyzed for the spring and summer surveys. These are:

Total phosphorus (MDL \leq 1 microgram/liter)

Total dissolved phosphorus (MDL \leq 1 microgram/liter)

Nitrite & nitrate (MDL \leq 0.03 milligram/liter)

Dissolved reactive silica (MDL \leq 0.01 milligram/liter)

Chloride (MDL \leq 0.13 milligram/liter)

And potentially, Dissolved reactive phosphorus conducted aboard the R/V Lake Guardian. (MDL \leq 0.5 microgram/liter)

Method Development:

Method development is undertaken by the chemist in response to monitoring and research needs. The most recent methods developed were bioavailable phosphorus (NaOH extractable P), and a low level method for dissolved reactive phosphorus to be performed aboard the ship.

We anticipate adding several cations and anions to the routine monitoring chemical suite and will require methods development for those.

Data management/Data analysis:

The environmental scientist is required to manage data generated from the chemical and sensor sections of the monitoring program. This includes formatting chemical analytical data into a specified format (GLENDATA) for reporting to the EPA. As part of this formatting, initial quality assurance assessments are performed. Additional quality assurance assessments, leading to acceptance and publication of the data are also performed by the environmental scientist.

The environmental scientist also analyzes and interprets the data from the monitoring program and presents this information in graphical form. This may include development of presentation formats and data and database organizational protocols.

